

WHAT IS CLAIMED IS:

1. A handheld device comprising:

5 a gesture database maintaining a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the handheld device, the gestures comprising a plurality of remote command gestures and at least one device selection gesture;

10 a gesture mapping database comprising a plurality of command maps, each of the command maps corresponding to a particular controllable device and mapping at least one of the remote command gestures to a command for controlling operation of the particular controllable device;

a motion detection module operable to detect motion of the handheld device within three dimensions;

15 a device selection module operable to detect the device selection gesture based on the motion of the handheld device and to select a currently controlled one of the controllable devices in response to the device selection gesture;

20 a control module operable to select one of the command maps corresponding to the currently controlled controllable device, to track movement of the handheld device using the motion detection module, to compare the tracked movement against the remote command gestures to determine a matching gesture, and to identify, using the selected command map, the command mapped to the matching gesture; and

a wireless interface operable to transmit the identified command to a remote receiver for delivery to the currently controlled controllable device.

2. The handheld device of Claim 1, further comprising:

25 a device locator operable to detect, for each of a plurality of remote devices, a direction from the handheld device to the remote device; and wherein

the device selection gesture comprises a movement of the handheld device in a direction of one of the remote devices.

30 3. The handheld device of Claim 1, further comprising a display having a viewable surface and operable to generate an image indicating the currently controlled controllable device.

4. The handheld device of Claim 1, wherein the remote receiver comprises a wireless interface of the currently controlled controllable device.

5 5. The handheld device of Claim 1, wherein the remote device comprises audio/visual equipment.

6. The handheld device of Claim 5, wherein the identified command controls output of the audio/visual equipment.

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7. The handheld device of Claim 1, wherein the remote receiver comprises an element of a public wireless telephone network.

8. The handheld device of Claim 1, further comprising:
15 a first accelerometer operable to detect acceleration along a first axis;
a second accelerometer operable to detect acceleration along a second axis, the second axis perpendicular to the first axis; and
a third accelerometer operable to detect acceleration along a third axis, the third axis perpendicular to the first axis and perpendicular to the second axis; and
20 wherein:

the gesture database further defines each of the gestures using a sequence of accelerations;

the motion detection module is further operable to detect motion of the device using accelerations measured by the first accelerometer, the second accelerometer,
25 and the third accelerometer; and

the control module is further operable to match the accelerations measured by the motion detection module against gesture definitions in the gesture database to identify particular ones of the gestures.

9. A method for controlling remote devices using a handheld device comprising:

maintaining a gesture database comprising a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the handheld device, the gestures comprising a plurality of remote command gestures and at least one device selection gesture;

maintaining a gesture mapping database comprising a plurality of command maps, each of the command maps corresponding to a particular controllable device and mapping at least one of the remote command gestures to a command for controlling operation of the particular controllable device;

detecting motion of the device within three dimensions;

detecting the device selection gesture based on the motion of the handheld device;

selecting a currently controlled one of the controllable devices in response to the device selection gesture;

selecting one of the command maps corresponding to the currently controlled controllable device;

tracking movement of the handheld device;

comparing the tracked movement against the remote command gestures to determine a matching gesture;

identifying, using the selected command map, the command mapped to the matching gesture; and

transmitting the identified command to a remote receiver for delivery to the currently controlled controllable device.

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10. The method of Claim 9, further comprising:

detecting, for each of a plurality of remote devices, a direction from the handheld device to the remote device; and wherein

the device selection gesture comprises a movement of the handheld device in a direction of one of the remote devices.

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11. The method of Claim 9, further comprising generating an image indicating the currently controlled controllable device using a display of the handheld device.

5 12. The method of Claim 9, wherein the remote receiver comprises a wireless interface of the currently controlled controllable device.

13. The method of Claim 9, wherein the remote receiver comprises an element of a public wireless telephone network.

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14. The method of Claim 9, wherein the gesture database further defines each of the gestures using a sequence of accelerations; the method further comprising:

detecting acceleration along a first axis;

15 detecting acceleration along a second axis, the second axis perpendicular to the first axis; and

detecting acceleration along a third axis, the third axis perpendicular to the first axis and perpendicular to the second axis;

detecting motion of the device using accelerations measured by the first accelerometer, the second accelerometer, and the third accelerometer; and

20 matching the accelerations against gesture definitions in the gesture database to identify potential indicated ones of the gestures.

15. Logic for controlling a handheld device, the logic embodied in a computer readable medium and operable when executed to perform the steps of:

maintaining a gesture database comprising a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the handheld device, the gestures comprising a plurality of remote command gestures and at least one device selection gesture;

maintaining a gesture mapping database comprising a plurality of command maps, each of the command maps corresponding to a particular controllable device and mapping at least one of the remote command gestures to a command for controlling operation of the particular controllable device;

detecting motion of the device within three dimensions;

detecting the device selection gesture based on the motion of the handheld device;

selecting a currently controlled one of the controllable devices in response to the device selection gesture;

selecting one of the command maps corresponding to the currently controlled controllable device;

tracking movement of the handheld device;

comparing the tracked movement against the remote command gestures to determine a matching gesture;

identifying, using the selected command map, the command mapped to the matching gesture; and

transmitting the identified command to a remote receiver for delivery to the currently controlled controllable device.

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16. The logic of Claim 15, further operable when executed to perform the steps of:

detecting, for each of a plurality of remote devices, a direction from the handheld device to the remote device; and wherein

the device selection gesture comprises a movement of the handheld device in a direction of one of the remote devices.

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17. The logic of Claim 15, further operable when executed to perform the step of generating an image indicating the currently controlled controllable device using a display of the handheld device.

5 18. The logic of Claim 15, wherein the remote receiver comprises a wireless interface of the currently controlled controllable device.

19. The logic of Claim 15, wherein the remote receiver comprises an element of a public wireless telephone network.

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20. The logic of Claim 15, wherein the gesture database further defines each of the gestures using a sequence of accelerations; the logic further operable when executed to perform the steps of:

detecting acceleration along a first axis;

15 detecting acceleration along a second axis, the second axis perpendicular to the first axis; and

detecting acceleration along a third axis, the third axis perpendicular to the first axis and perpendicular to the second axis;

20 detecting motion of the device using accelerations measured by the first accelerometer, the second accelerometer, and the third accelerometer; and

matching the accelerations against gesture definitions in the gesture database to identify potential indicated ones of the gestures.

21. A handheld device comprising:

means for maintaining a gesture database comprising a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the handheld device, the gestures comprising a plurality of remote command gestures and
5 at least one device selection gesture;

means for maintaining a gesture mapping database comprising a plurality of command maps, each of the command maps corresponding to a particular controllable device and mapping at least one of the remote command gestures to a command for controlling operation of the particular controllable device;

10 means for detecting motion of the device within three dimensions;

means for detecting the device selection gesture based on the motion of the handheld device;

means for selecting a currently controlled one of the controllable devices in response to the device selection gesture;

15 means for selecting one of the command maps corresponding to the currently controlled controllable device;

means for tracking movement of the handheld device;

means for comparing the tracked movement against the remote command gestures to determine a matching gesture;

20 means for identifying, using the selected command map, the command mapped to the matching gesture; and

means for transmitting the identified command to a remote receiver for delivery to the currently controlled controllable device.